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General Notes  
Econ Botany

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## OBSERVATIONS

ON

*Mineral Waters, and on Sea-Bathing,*

WITH

CAUTIONS AND ADMONITIONS

ON THEIR

*USE AND APPLICATION.*

IN the course of the foregoing work will be found an analysis of the different mineral waters, visited, with an enumeration of their qualities and effects; but as it may be satisfactory to know the principal component parts and classification of those salutary springs in general, we borrow the arrangement and remarks of the learned and ingenious Dr. THOMSON, in his late excellent work, "*The Family Physician*," on this subject; premising, that some medical person on the spot should always be consulted, in regard to the use and application of every kind of mineral water.

"The various substances," says this able writer, "occasionally found united with water, may be comprised chiefly under four classes; aerial, saline, metal. c, and earthy."

"The first of these classes contains atmospheric, vital, fixed, inflammable, hepatic, and phlogisticated airs.

"The second contains vitriolic, nitrous, and marine acids; natron, kali, ammonia, and sulphurated kali.

"The third contains iron, copper, zinc, manganese, and arsenic.

"The fourth contains magnesia, lime, clay, barytes, and siliceous earth.

"Of neutral salts, the vitriolic acid is found united with natron, kali, lime, magnesia, clay, iron, copper, and zinc.

“ The nitrous acid, with the four former of these. The marine acid with the same, and sometimes with barytes, manganese, and clay. And the ærial acid with these, and also with iron, zinc, and manganese.

“ Sulphur, fossile oil, and extracts from vegetable and animal substances, are also found sometimes in mineral waters.

“ From the various substances above-mentioned, and their different combinations, are derived all the virtues of mineral waters, except such as they obtain from their temperature.

## CLASSIFICATION OF MINERAL WATERS.

### CHALYBEATE WATERS.

Of all the mineral waters, the chalybeate are the class most useful and beneficial to health ; and are very plentiful in this island.

Waters are known to be chalybeate by their striking a reddish purple, or black colour, with an infusion of galls ; and according to the height of the colour, provided the strength of the infusion be the same, we invariably judge of the strength of the water as a chalybeate.

The iron in these waters is held in solution by means of fixed air ; and as this flies off on exposing the water, the iron falls to the bottom, in form of a brownish yellow powder. Hence these waters strike the deepest black with galls, at the spring head ; and in time they wholly lose that property. They have a brisk, acidulous, or vinous taste, when fresh, and tinge the stools black.

Chalybeate waters, taken inwardly, strengthen the constitution in general, increase the tone of the fibres, quicken the circulation, and restore a proper consistence to the blood when in a too thin and watery state. Hence they are good in diseases arising from weakness ; in spasmodic disorders, arising from too great irritability and relaxation of the nervous system ; in fluor albus, and gleet ; in female obstructions ; in hysteric and hypochondriacal disorders ; in loss of appetite and indigestion ; and in a variety of other complaints, dependent on a weak state of body.

Though mineral waters, in general, should never be resorted to without medical advice, it may be here proper to observe, that previous to a course of chalybeate waters, bleeding, and a cooling purge, may be necessary, in case of heat, and any disposition to fever. Indeed, where there is much fever, and also in ulcers of the lungs, and in confirmed obstructions attended with fever, the use of these waters is improper. It is also a necessary caution, that costiveness should be avoided while drinking them.

Patients ought to begin by drinking a small quantity of these waters every morning, and gradually increase the dose. A temperate diet, and gentle exercise, should always be observed while taking them.

If the water should prove too cold, a bottle containing some of it may be placed in warm water just before drinking.

Acids, tea, and other things which decompose those waters, should not be taken for some time before or after drinking them.

Besides iron, these waters usually contain sea-salt, natron, a purging salt, and other substances.

#### CHALYBEATE PURGING WATERS.

Chalybeate Purging Waters contain a greater proportion of purging-salt than of any other solid matter, and therefore when taken in sufficient quantity, or that of several pints, they operate by stool. They have this advantage over other purges, that they do not exhaust the strength.

If taken in less quantity, as alteratives, they operate chiefly by urine. The principal of this class are

#### SULPHUREOUS WATERS.

Sulphureous Waters, though so named, do not contain an actual sulphur, but are impregnated with a gas, or subtle spirit, which gives them their sulphureous smell. Besides this, they usually contain either natron, sea-salt, a purging salt, iron, earth, or other matter, and commonly several of these in different proportions.

Waters of this sort are diuretic, and strongly diaphoretic, and are therefore good in cutaneous diseases, used both internally and externally. They are also good in chronic obstructions, and in disorders proceeding from

acidity, worms, &c. They usually make silver appear of a copper colour.

#### SULPHUREOUS PURGING WATERS.

SULPHUREOUS PURGING WATERS differ from the preceding in containing a purging salt as the principal solid ingredient, and therefore operating by stool. They are good in the same disorders as the alterative sulphureous waters, as also for foulness of the bowels, &c.

#### SALINE WATERS.

ACIDULOUS, or *saline waters*, contain natron. This salt, as the waters are taken up from the fountain, is saturate, or rather supersaturate, with fixed air; hence the waters do not then manifest any alkaline quality; on the contrary, they curdle with soap, and are termed *acidulæ*. This fixed air, or æriel acid, however, being very volatile, soon exhales when the water is heated, or stands a while exposed, and then the alkali manifests itself.

The operation of these waters is chiefly by urine, for they have little or no purgative virtue. They serve to correct acidities, render the blood and juices more fluid, and promotes a brisk and free circulation. Hence they are good in obstructions of the glands, and against gross and viscid humours. They are useful in the gravel and stone, and in other disorders of the kidneys and bladder, as well as in gouty and rheumatic complaints, cutaneous disorders, and likewise those of the nervous kind.

#### VITRIOLIC WATERS.

VITRIOLIC WATERS are those which are impregnated with green vitriol or copperas, and strike a black colour with galls. They are chiefly used externally for washing old sores and the like, and frequently with good effect. In some cases, however, they are taken inwardly in small doses, and then they prove emetic and purgative.

#### HOT MINERAL WATERS.

THERE are in England a great number of *cold* mineral waters; but of the *hot* very few.

The *warm* waters possess many of the virtues and properties of *cold* waters of the same class, and which are



impregnated in the same manner ; but they are preferable in many cases, as from their warmth they are more kindly and agreeable to the stomachs of weak people, and promote perspiration.

The warm waters are also used as warm baths, and may in general be considered as warm medicated baths. By relaxing the fibres, they are useful in a variety of disorders which arise from rigidity, and spasm, and also from other causes. Hence they are of great use in rheumatisms, inflammations, costiveness, &c. in which the cure is commonly assisted by the internal use of those waters.

### SEA-BATHING.

On the subject of bathing, particularly in salt water, much has been written by medical men ; but as no general rules can apply to individual cases, what has been said in regard to drinking mineral waters equally applies here too ; that the advice of a physician should always be taken before a valetudinarian commences a course of bathing, either in fresh or salt, hot or cold water.

The general and indiscriminate use of bathing is allowed on all hands, frequently to lay the foundation of a train of maladies, and instead of being a harmless or salutary amusement, is often destructive to health and enjoyment.

In order to secure the good effects of cold bathing, a previous immersion or two in a tepid bath, of about eighty-four, will be highly conducive. The body will thus be purified, and the absorbent vessels will have an opportunity of acting with more freedom and force.

Bathing early in the morning, is, in many respects, preferable to a late hour, when the constitution is able to bear it. It induces a habit of early rising, and the water at that period of the day, being most cool, of consequence has a more tonic effect.


They who bathe every morning, instead of strengthening the habit, take the surest way to weaken it. Twice or thrice in a week is amply sufficient ; and instead of continuing long in the water, or taking repeated dips, the first plunge is the only one that can be attended with any utility.

At the commencement of a course of bathing, twice a week is enough ; and thrice in the middle. Before its

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close, the bather should again confine himself to an immersion every three days, or even at a longer interval.

Salt water, even if not thoroughly wiped from the body, is not apt to give cold, and therefore the bather, after an immersion, need not be anxious on this account; but proceed to take such exercise as may keep up moderately, or promote the salutary glow, which is the test of the bath agreeing with the constitution. Fatigue should be avoided by those who have recourse to the cold water for debility; their own feelings will be the best direction.



*N.B. The Communication of Corrections and necessary Additions, and the Loan of correct Drawings, will be thankfully acknowledged.*





